THE YARROW PUG *EUPITHECIA MILLEFOLIATA* ROESSL. (LEP.: GEOMETRIDAE), NOW APPARENTLY WIDESPREAD AND LOCALLY COMMON IN EAST ANGLIA

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UP TO THE early 1990s, I had considered *Eupithecia millefoliata* to be a very local species, resident around the Thames estuary and a few locations near to the coast of Kent, Sussex and Hampshire, but occurring as an occasional vagrant elsewhere. This was based initially on the distribution maps produced by the Biological Records Centre at Monks Wood. When, in 1992, I found larvae at Icklingham, in Suffolk, I thought I had made a significant discovery until, on checking my literature, I found that G.M. Haggett had already reported established colonies around Thetford and the Stamford Training Area in Norfolk (Haggett, 1992). I also learned that A.M. Emmett and others had found the Icklingham site in 1991.

Haggett also mentioned the late Prof. Colin Smith's record from Cambridgeshire in 1979. I was aware of this, but attributed it to the species' habit of turning up unexpectedly in widely scattered locations around the south-east. This view was certainly influenced by my previous experience, having found larvae in my back garden in Royston, in 1981. Following this, I spent many fruitless hours, failing to find any further evidence of the species in the Royston area during that season or the next.

My interest in the species was re-awakened when I found larvae in good numbers at Santon Downham, Suffolk, during the last week of September 1998. A striking feature was the range of sizes present – extending from early second instar to pre-pupal. I attributed this to the indifferent summer and well-spaced periods of warmth. Taking a slightly circuitous route back home, I found seven further colonies of larvae near Brandon, Lakenheath, Cavenham and Herringswell.

I wondered how much more widely the species may be found in the East Anglian area. Taking the totality of sites known to me into consideration, I concluded that the best sites for this species would have light to sandy soil, with *Achillea* growing in fairly thin, fine grassland fully exposed to the sun. My thoughts turned to the aptly named Sandy Heath, in Bedfordshire, although I noted that the recently produced County List (Arnold *et al.*, 1997) had no records. From the Ordnance Survey map it was obvious that there were a lot of lanes and bridleways that may need to be examined, so I decided to take a bike. This was an excellent decision, for in this intensively agricultural area, it took me three hours cycling to find just two good patches of *Achillea*, one on the Heath and the other near Everton. Both had larvae, but generally small and not as abundant as in the Breck. Vic Arnold, and county recorder, Len Field, confirm that they have no unpublished records since the book was produced, which makes this a new county record. Encouraged by this, I decided to investigate further the breeding status of the species on the western side of East Anglia.

Following Smith's record, Cambridgeshire was an obvious choice. The soil around the south-west of the city of Cambridge is fairly variable, but light in places and I soon found larvae in good numbers at Trumpington and Grantchester. Within this county, larvae were also found at Sawston, Whittlesford, Duxford, Ickleton, Fowlmere, Barrington and Chrishall Grange, the latter being a bit of an exception in that it was the only site on which larvae were found over a distinctly chalky soil. Most other sites were loam or sandy loam. There is no recent county list for Cambridgesire, but county recorder, Ray Revell, took a specimen at light on 23 July 1978, at a chalk pit near the Gogs golf club and a further specimen was taken by John Dawson at Little Wilbraham Fen on 28 July 1998.

In Essex, the range has expanded since distribution maps were produced by the Biological Revords Centre. It now appears well established in South Essex (Emmet & Pyman, 1985; Plant, 1993), and there has been some expansion northwards in the east of the county, but two moths taken by Maitland Emmett in 1992 and 1995 were previously the only records north and west of Colchester (Brian Goodey, *pers. Com.*). As in Bedfordshire, suitable sites were very hard to find in the area of North Essex which I examined. An area was covered around Saffron Walden and towards Haverhill, but most of the few patches of Yarrow found were on rather heavier soils and no larvae resulted. I had tended to consider roadside verges as generally unfavourable and in Essex this was certainly true, as most had been cut at least once since mid-summer. *Achillea* on narrow, uncut strips within the splash zone at the side of the road was unproductive at the few locations sampled. In Cambridge, however, cutting had been restricted to the edges of some wide verges and at the backs of these verges larvae were quite prolific. Thus, near Saffron Walden, I eventually found some such verges and a single larva resulted at one site on the eastern side of the town. Larvae were more abundant at Audley End and a few were also found at Wendens Ambo and Hadstock.

In Hertfordshire, a thorough search was conducted of lanes, roadside verges and paths within the area bounded by Royston, Barley, Barkway, Buntingford, and Baldock. Some excellent patches of *Achillea* were found along the broad verges of the A505 road and locally elsewhere within the area, including parts of Royston Heath, but no *E. millefoliata* larvae were found anywhere within this area. Despite this, a number of sites had good populations of larvae of *E. icterata*. As in Essex, a large proportion of verges had been cut at a time that rendered them useless to *E. millefoliata*.

In conclusion, it seems that *E. millefoliata* is now resident and widespread over a considerable part of East Anglia and abundant where conditions are ideal. In the more intensely agricultural areas and on heavy soils, it may be difficult to find good patches of *Achillea* anywhere other than roadside verges and these may contain larvae only if the cutting policy permits. The fragility of roadside verge populations was sadly illustrated by the fate of four sites within this survey, which were destroyed by cutting within days of discovery. The fate of most others is unknown.

The management of roadside verges has moved on from the days when they were routinely sprayed with lawn weedkillers, but it is still far short of perfect. Much is now sub-contracted by councils to local farmers and timing is thus governed by the farming calendar. In general, a single cut in late spring and another in late autumn will retain order and floral diversity. Restricting any summer cutting of broad verges to the roadside edge and the inside curve of bends provides good flora over a prolonged period, as many of the species present in the uncut area will flower at a reduced height and later period in the cut area. If the autumn cut is delayed until November, then most Lepidoptera larvae will be off the taller plants and the flowers will have time to set seed, benefiting the continued diversity of wildlife in the verge. Even so, smaller species of plants will continue to struggle against the thick thatch, which is often left smothering the verge after the autumn cut. Is it any wonder that only coarse grasses and tough perennials survive in so many of our verges? Better management of the best verges in an area may need to involve local conservation groups but it is unlikely to be easy to achieve.

References

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Some records of Lepidoptera from Westmoreland (VC69)

The year 1998 was one of the worst on record in my experience – an experience extending over 60 years. True, I was not able to do much field work – age is catching up on me so that most of my collecting and observations are now restricted to my own small garden in Grange-over-Sands. I operate a m.v. moth trap when conditions (to the human senses) seem likely to be productive. Last year numbers, both of species and individuals, were well down on those of recent years. In spite of this I noted three species of macrolepidoptera that I had never seen in this district before, and believe these may be worth recording.

Polygonia c-album (L.) – A fresh specimen was observed nectaring on a *Buddleja* bush in my garden on 31 July. My wife first noticed the specimen and we had it under observation for about five minutes. This species appears to be experiencing one of its phases of expansion of range. I have heard of other specimens having been observed in this district at about the same date.